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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,903	06/29/2001	Hong Bae Park	041501-5437	4657

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EXAMINER

PHINNEY, JASON R

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,903

Applicant(s)

PARK, HONG BAE

Examiner

Jason Phinney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-16, drawn to a flat luminescent lamp, classified in class 313, subclass 485.
 - II. Claims 17-20, drawn to the method of manufacture, classified in class 445, subclass 24.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the instant invention may be made by the materially different process of forming grooves on the two substrates that are not stripe shaped.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Karen Loewenstein on 2/19/03 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-16.

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Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-20 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 9, 11-13, and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 4,767,965 to Yamano.

Regarding Claim 1, Yamano discloses a flat luminescent lamp comprising first and second substrates (Figure 9, #'s 54 and 56) attached to each other at a plurality of adhesive portions (Figure 10, #60), with a plurality of discharge spaces in regions other than the plurality of adhesive portions between the first and second substrates (Figure 9, #20 is broken into three discharge regions by spacers #62), first and second electrodes arranged in the discharge spaces to be separated from each other (Figure 9, # 14), first and second phosphor layers formed in the discharge spaces (Figure 10 #'s 22 and 24), and first and second frames sealing the first and second substrates (Figure 10, #58).

Regarding Claim 2, Yamano further discloses that there should be a reflecting material layer formed in the discharge spaces adjoining the first substrate (Figure 10, #50).

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Regarding Claim 3, Yamano further discloses that the plurality of discharge spaces should be formed along a vertical direction of the first and second substrates (see Figure 9, #20 is broken into three discharge regions by spacers #62).

Regarding Claim 4, Yamano further discloses that the first and second frames should be formed along a horizontal direction of the first and second substrates (see Figure 10, # 58).

Regarding Claim 9, Yamano further discloses that the first and second substrates should each comprise a glass material (Column 6, Lines 13-15).

Regarding Claim 11, Yamano further discloses that the first and second electrodes should be formed along the discharge spaces (see Figure 9, # 14).

Regarding Claim 12, Yamano further discloses that the plurality of discharge spaces should have a stripe shape (see Figure 9, #20 is broken into three discharge regions by spacers #62).

Regarding Claim 13, Yamano further discloses that the plurality of discharge spaces should be spaced apart from each other (see Figure 9, #20 is broken into three discharge regions by spacers #62).

Regarding Claim 15, Yamano further discloses that the first frame should be attached to the second substrate along one side of the first substrate while the second frame should be attached to the first substrate along a side of the second substrate that is not attached to the first frame (See Figure 10, frame #58 on both sides is attached to both substrates #'s 54 and 56).

8. Claims 1, 5, 8, 10, 14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 3,873,870 to Fukushima.

Regarding Claim 1, Fukushima discloses a flat luminescent lamp comprising first and second substrates (Figure 3b, #'s 6 and 11) attached to each other at a plurality of adhesive portions (Column 2, Lines 42-44), with a plurality of discharge spaces in regions other than the plurality of adhesive portions between the first and second substrates (Figure 3b, #9), first and second electrodes arranged in the discharge spaces to be separated from each other (Figure 3b, #'s 1 and 2), first and second phosphor layers formed in the discharge spaces (Figure 3b # 12), and first and second frames sealing the first and second substrates (see Figure 3b, the cathodes #2 also function as frames).

Regarding Claim 5, Fukushima further discloses that the first electrode should include a transparent conductive material (Column 10, Lines 37-38).

Regarding Claim 8, Fukushima further discloses that the plurality of discharge spaces should each have a round shape or a polygon shape close to a round shape (see Figure 3a, #9).

Regarding Claim 10, Fukushima further discloses that the first substrate should comprise a ceramic material while the second substrate comprises a glass material (Column 4, Lines 13-17).

Regarding Claim 14, Fukushima further discloses that the first electrode should include two or more separate electrodes (see Figure 3a, anodes #1 or cathodes #2).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 3,873,870 to Fukushima in view of Japanese Patent Publication No. 8-162069 to Go.

Fukushima discloses all of the limitations of Claims 1 and 5 as described above.

Regarding Claim 6, Fukushima fails to exemplify that the transparent conductive material should include indium tin oxide.

Regarding Claim 7, Fukushima fails to exemplify that the lamp should further comprise a first dielectric layer formed in the discharge spaces adjoining the first substrate and a second dielectric layer formed in the discharge spaces adjoining the second substrate.

Go, in an alternate flat luminescent lamp teaches that indium tin oxide is commonly used as a transparent conductor due to its favorable optical and electrical properties (see Example, Paragraph 1). Go further teaches that a first dielectric layer should be formed in the discharge spaces adjoining the first substrate and a second dielectric layer should be formed in the discharge spaces adjoining the second substrate (Figure 1, #4) in order to insulate the electrodes from the fluorescent phosphor layer to prevent unintentional lighting.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the ITO and dielectric layers taught by Go in the flat luminescent lamp of Fukushima in order to take advantage of ITO's optical and electrical properties and to separate the electrodes from the phosphor layers to prevent unintentional discharge.

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11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,873,870 to Fukushima in view of U.S. Patent No. 5,341,231 to Yamamoto.

Fukushima discloses all of the features of Claim 1 as described above:

Fukushima fails to exemplify that there should be a diffusion sheet formed at a rear side of the second substrate.

Yamamoto teaches that there should be a diffusion sheet formed at a rear side of the second substrate in order to enhance the uniformity of light (Column 18, Lines 39-42).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the diffusion sheet taught by Yamamoto in the lamp of Fukushima in order to enhance the uniformity of the light.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Phinney whose telephone number is (703) 305-3999. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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JP

February 27, 2003



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